How we categorize knowledge is then secondary: what is primary is the manner in which we approach and behold and know whatever it is that we are trying to know. Thus philosophy includes science because the object of every inquiry, scientific or philosophical, is in every case to clarify, to enhance our speculations as to truth with concrete evidence. It is not an artificial procedure to combine science with philosophy; in fact, not to do so is rather the artificial thing because science and philosophy are not in quest of different ends, nor is one a matter of hypothesis and the other of experience. Both follow the way of hypothesis through experience to discovery. They differ, if at all, in that philosophy is the inner investigation of the outer phenomena studied by science. But knowledge of the inner is just as much known and controlled by experiment which leads to experience as is knowledge of the outer.

One begins with the sensuous intellect and goes deep into abstract thought. The other begins with the abstract and by it considers the sensuous. Science and the naturalistic branches of philosophy consider the abstract or ultimate real with the information given by the senses. The idealistic philosophies and religion view realistic or sense nature through the knowledge of mind.

The study of phenomena deals with sensuously known forms while the other, the investigation of the mind or noumenon, reveals the abstract lying behind sensuous realities. What causes our feeling that the two, though really companionate in nature, have separate fields of study, is that science can demonstrate its findings by means of extraspectively visible demonstrations, while abstract knowledge has for its laboratory and tools only the individual himself.

In the abstract or introspectively known reality, the individual becomes the way and measure of all discovery which each, in turn, has to acquire by and for himself. If he would verify truth, he must himself sally forth as verifier while extraspective knowledge makes no such demand because the world in which it pursues its search is more known to the explorer. Its conceptions deal with events which, at least to start with, anyone can see. And its verifying tools, once produced, are ready at hand for anyone to use.

Science, then, gives us a knowledge which can be verified by instruments which obtain closely similar or identical observation results in repeated experiments of the same phenomena. In philosophy, the science of introspection which observes and interprets the same phenomena with which science deals, we also get definite knowledge. But here we interpret not readings of instruments but readings of the mind itself whose powers are unequal in the individual cognizer. Given the proper instruction, physical instruments can be used by anybody, but not everybody can conduct verifying experiments with the philosophic tools of rational and intuitive reason. One cannot borrow the brain of the philosopher-analyst of mind, and however much one is instructed verbally, it is impossible for him to proceed along the same course as subjectively recorded mense. another in his thinking about mind.

a universal standard, one that all must accept, whereas minds that turn to philosophy have no such standard at their disposal. But this is not to say that each mind has a different truth. Every mind penetrates the same truth to a different depth. The discoveries that are made are not different; thay are all various descents into one depth of truth.

Mife: Sept. 12th, 1947. P. 90. The Age of Enlightenment.

"Slowly and surely the Enlightenment began that process whereby philosophy, the search for truth, was supplanted by science, the search for facts."

Philosophic truth is scientific fact; fact is truth and truth is fact; but one, philosophy, deals with the interstices of mind and the other, science, with the webbing called matter.

But the results of experimentation performed in the kabenticry laboratory are only findings and not facts at all. The fact exists but the finding is only one of the aspects, one the minute aspects of the fact. And an aspect does not reveal the fact.

To know the fact, one must delve into the mind itself, not only with mind into matter, but mind into mind. The fact is the lasting truth; the finding is the temporary discovery. What we know of the structure of matter is destined not to stand as final word. Therefore it is a temporary finding. So it cannot be fact which is the lasting truth.

In order to come upon fact, the fullness of mind has to be experienced; not examination of a mental expression. That is not coming upon the mind itself. The mind has got to be come upon with a fullness of experience. In other words, with the mind's fullness focussed upon itself, it beholds the fact of itself, including the fact that it realizes the meaning of the findings of science.

The more the mind knows itself in connection with a theory or in connection with the finding, the more it understandinitself concerning the object studied, scrutinized, examined, observed. Let any object or event be scrutinized, and all that is seen is the mind beholding itself in its special concern.

When I see a star, & see an expression of energy and (my) observing the an expression of energy. Now the beholding is of a different

quality than the beheld. It is a different expression. But the beheld is not a devorced expression from the energy which is beholding. At all events, the mind is beholding itself in its expression whether it cognizes or is being cognized.

It cannot be said that matter is also the expression of energy which, in the subtler form, observes and cognizes. Even though there is no scientific evidence for this, there is at least the possibility. We are not concerned with whether matter cognizes or not. We are concerned with man's cognition being an expression of the same energy as the object or the world he cognizes, matter being another expression of that energy, though essentially the same.

Energy kis the same in all phases of existence. Science observing matter is mind observing condensations of mind-energy. Mind observing mind is a branch of science defined as spsychology.

For an observation alone, even a scientific observation, without insight into the essence of what is seen, leads to coarse reason and coarse pursuits. By too much coarse reason our existence also becomes coarse.

While every exploration of things and events gives us knowledge, we cannot say that the most dependable explanations are
those which are supplied by science; which alone gives definite
knowledge while other avenues of discovery - religion and
lead us or lead us or unio
philosophy - give us either unsupported dogma or unverifiable
theories. (see p. xiii, Russell. Introduction. A History of
Westernalhilosophy).

boes science really give us, as we may suppose, definite knowledge? It claims, as a very definite generality, that the world is round, that this is the best way to see it for the sake of understanding. Yet it gives us no unequivocal proof of the reality of the earth's roundness. What it does give are quantitative equivalents of sense-data - not shape but need ficients of curvature, not color but the number of light oscillations per second, not hardness but the coefficient of rigidity. (See p. 84: Jeans, III).

Physics with its measures gives us only an abstract world to be known by the pointer readings of its instruments. And so, just as with the atom which remains a blur, the shape of the world remains a blurred something to the physicist. Shape, color, texture, temporal extension, beauty - these do not exist to the unsensuous measuring instrument. All an Einstein can give us is only a quantitative estimate of energy activity. We would go to him in vain for any enlarged insight into any sensuous impression of ours as summed up in the form of a quality.

The world has no shape without the intervention and interpretation of the senses which perceive. What fabricates the world's shape, together with its color, beauty, and utility, is our sensory reflexes, together with our self-consciousness of them. The pointer readings of science give us a code comprised of symbols of form which our senses construct into collect.

more or less definite shapes. But we can only put these symbols into forms because the forms are before us through our sense of the familiar world. If we did not have the sense which gives us the compound which is an object, the numerical data of science would provide us only with symbols which we could not forms parallel with those encountered in our everyday experience.

The world, then, may or may not be round; the evidence supplied by our senses is in the affirmative. But as to the reliability of this evidence, science has nothing positive to say. And the reason that it can say so little is that our habits of sense dictate to us what interpretation is to be given to the numerical symbols of science.

abstract

Pointer readings give us a picture of energy impulses while our usual sensuous perception projects them into emotional imageries. For everything we see has an emotional component without which there is no sense world which is primarily a world of the emotions. If one had no feelings, a form would be meaningless inasmuch as the feeling gives it its meaning of associations.

Feeling dictates form - that is, the dimensionality of form.

Feeling brings the dimensions together; it makes of them a

more comprehensive experience.

There is always an inner emotion which corresponds to an outer object. The feeling helps to intelligence an energy-stimulus

supplement our bnowleyes

Just as science fails to provide us with understanding of the physical qualities of our world, so it gives us no insights into the qualities by which the living organism is differentiated from its inorganic environment. Thus, the biologist of mechanistic persuasion maintain, in his exclusive emphasis on mechanical causation, that there really is no difference between the organic and the inorganic; that the ordinary processes of change and activity occurring in the month of the non-living (p. 226 Cunningham) are identical with those that the place in living entities. But the so-called ordinary processes that occur in the living organism (and this also applies to non-vital activities) are something more than just ordinary where all superstition is put aside. To minimize or over-exaggerate the mysteriousness of vital processes is to display a superstitious attitude.

Physical and chemical processes are, indeed, objects of direct experimental observation in the laboratory, but this makes the phenomona observed, whether or not transpiring in a living thing, only momentarily digestible but not understandable. It is true enough that something is seen, but what is seen is not simple and that is where the deductions of the mechanist fall short of fact. Undoubtedly he sees something of the results of interacting energies, but this is not necessarily to see penetratingly. To record the contraction of a muscle, to measure the strength of an electrical impulse running through a nerve, to follow the successive steps in the digestion of protein - this is not necessarily to decipher the purpose of that contraction, impulse, or digestion.

But the largest significance of any observed behavior lies not in what it does but in what its doing ultimately hims at. It is in every one of our diversified actions and reactions, including the bio-physical, that the ultimate aims of our living seek to be fulfilled. In a school the teachers gossip with thehrotoligaspend time at lunch, relax over a newspapera and so on. But the ultimate aim of these these activities is learning. Analogously, it seems that every process occurring in us, every transferrence of energy, impulse, thought, and behavior, is evolution. But what is the aim of evolution? It cannot just be to perpetuate physical life but must mainly be to fulfill the evolution of intelligence in us by means of every experience of ours. Indeed. every process in the universe hinges upon the fulfillment of possibilities and these upon the fulfillment of whole intelligence. But the pointer readings of science apply to every process but this for the reason that science deals not with meaning but with observation. However meaning is the final desideratum, so that issue without which an obersation is useless in giving an answer to life unless it hears upon meaning

p. 329 Eddington

Exact science is not souless when one brings feeling to it. And to bring feeling to it is inevitable. Without feeling, form and every delineation of existence as well as every conception of existence dissappears. If exact science measures only the impulses of energy, then these energy impulses give also the expressions of our familiar forms. The forms themselves may not be measured by the instruments which give our pointer readings but the energy which produces them do give us our familiarn forms. That is, the energy which produces the emotions in the human instrument is the same which gavesinsotheereading of the pointer by the mechanical recorder. The readings in the machine only report doss and dashes. In the human instrument they report form and such intangible features and structures and sensations as form, beauty and other emotions as beauty, joy, and fear. The mechanical instrument of observation sees the same energy. The only difference here is that the human portrayingly machine records sensuous forms. This is to say it recognizes forms which report a sensuous universe whereas the mechanical instrument records a universe of energy in quantitative metrics, the energy being the same but the recordings being qualitatively different.

The human instrument gives us what the machine gives us (plus significance) emotional value). It gives us not only dots and dashes, coefficients and frequencies, but emotional significance and

vlaue

value which does not exist for the mechanical device. The forms of the universe exist then to incite the thought-feelings in sentient beings to growth. Beauty is implicated with growth. Would it not be that without the beauty of nature we as sentient beings could not live? Beauty is as necessary to the growth of man as the sun to the survival of all living existences. The sun, too, is part of beauty in man's life, not only being there as a purely physical necessity.

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We are so conditioned that we expect to arrive at truth through mechanical devices - macroscopic and microscopic extensions of photography - which have no aperture, opening, lens that would reveal the psychic world. The psychic demands a consistently psychological approach. But the mechanical device, while very helpful, is at best an adjunct.

As these adjuncts are employed today, they give descritpions. They trace connections between one event and another in temporal sequence - and that very well. But they give no insights into the content of the event for the derivation of meanings beyond physically arrived at hypotheses is quite beyond their scope of usefulness.

The instrument can only circumscribe; the mind goes in and, by going in, really gives gives connections. That is, the mind explains and does not merely describe the appearance of a train of action.

Life whose broadest aspect is the psyche is formidably limited by the descriptive picturings of scientific research. The phenomena - not realities - of life thus captured are circumscriped; they are not phenomena sharing in the full range of life.

These procedures of descripting are not really invaluable analyses as they are affirmed to be because they suffer from two defects. Firstly they

plays of what is observed, Then, when it comes to putting back the results of analysis into a whole, that whole turns out to be an artificial construct, one necessarily derived from the restricted observation; not a coherent and living whole having due regard to the thing or being in its original environment.

Knowledge cannot be dispersive. It must be increasingly unified through voluntary intelligent consent. Otherwise it only becomes regimentatively adaptive and provocative of imitation, that is, dissension and violence.

The study of phenomena deals with sensuously known forms while the other, the investigation of the mind, reveals the abstract lying behind sensums realities. What causes our feeling that the two, though really companionate in nature, have separate fields of study, is that science can demonstrate its findings by means of extraspectively visible demonstrations while abstract knowledge has for its haboratory and tools and field of demonstration only the individual himself.

In the abstract or introlspectively known reality, the individual becomes the way and measure of all discovery which each in turn has to acquire by and for himself. If if would verify truth, he must himself sally forth as verifier while extrospective knowledge makes no such demand because the world in which it pursues its search is more known to the explorer.

ophy and religon, is experience. Each finally points to the same truth to be won by experiment. They are all experiential disciplines.

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The various categories of knowledge are secondary; the

beholding is in every case primary. Thus philosophy includes

science because the object of every inquiry, scientific or

philosophical, is in every case to clarify; to to enhance our

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Its conceptions deal with a world which, at least to start with, anyone can see. And its verifying tools, once produced, are ready at hand for anyone to use.

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Science gives us a knowledge which can be generally measured by instruments which can obtain closely similar or identical results in repeated experimentation upon the same phenomena. In philosophy which depends upon the science of introspection and the observation and interpretation of the same phenomena with science deals with, we also get definite knowledge. But here we observations obtained by instruments dut by instruments of the mind itself which are unequal in the individual cognizer. Physical instruments can be used by anybody (given the

experiements with the philosophic tools of rational and intuitional reason. He cannot botrow the brain of the analyst and however much be is instructed verbally, he cannot proceed in his thinking, he cannot be some that

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Every mind hasn't got a different truth. Every mind penetrates truth to a different depth. The truths that are being penetrated are not different; they are all various descents into one depth of truth.

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"The mechanist holds that the living organism is only a physical-chemical machine and that its behavior can be resolved

by analysis into physico-chemical processes. For him there is fundamental no difference between organic and inorganic matter; the chief difference which he ndmignites that of complexity. It is a rather common assumption that life is something more than the ordinary processes of change and activity that take place in the living organism. Life, so it is sometimes supposed, is a mystermous entity which is radically different from those poservable processes."

But the mechanist maintains, in his exclusive emphasis on mechanical mechanical causation, that there really is no difference between the (living) organic and the (living) inorganic; that the ordinary physice-chemical transformations occurring in the non-one withvital changes and activities. living are identical with those occurring in living entities. But the so-called common compodinary approcesses that take place in the living organism (as non-vital activities) are something more than just ordinary where all superstition is put aside. To minimize or to over-exaggerate the mysteriousness of vital processes is to display a superstitious attitude.

Physical and chemical process are, indeed, objects of direct experimental observation in the laboratory but this makes the phenomena observed, whether or not ina living thing, only momentarily digestible but not understandable. It is true enough that something is seen, but what is seen is not simple and that fall short of fact. is where the deductions of the mechanist are in error.

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any observed behavior The largest significance of our lies not in what it does but in what its doing ultimately aims at. It is in every one of our diversified actions and reactions that the ultimate aims of our living seek to be fulfilled. In a school, the teachers may eatind time at lunch, gossip with their colleagues, relax over a newspaper, and so on. But the ultimate aim of all these diverse activities is learning. It seems that every thought-impulse, whether or not embodied in behavior, subserves the aim of evolution. But what is the aim of evolution? It cannot merely be to perpetuate physical life, but to fulfill the evolution of intelligence was by means of every experience of ours. And so the means of evolution include every and all experience of ours. Indeed, every process in the universe hinges upon the fulfillment of possibilities and these upon the fulfillment of whole intelligence.

The pointer readings of science apply to every process but this for the reason that science deals not with meaning but only with observation. But meaning is the final issue upon which every observation hinges to give an answer to life.

While every depended application met defendation up P. Xiii. Russell. "All definite knowledge - so I should contend - belongs to gut wo science; all dogma as to what surpasses definite knowledge belongs to theology. But between theology and science there woman is a No Man's Land, exposed to attack from both sides; this unequality by posterto No Man's Land is philosophy." Undentetables are get provileda But does science give us definite knowledge? It claims, as a very definite generality, that the world is round. It says that this is the best way to see it for the sake of general understanding. But upon this point it does not give us any proof reality of the cartho as to the wanthis voundness. Physics cannot give us the shape of the world. It registers somerad only the presence of qualitative and quantitative qualities. but as to its shape and form and color - that is the sensuous intellect's interpretation. Physics with its measures gives us only an abstract world and so where nemous a believe to be known by pointer readings. Just as with the atom, physics of the world cannot give us the shape or the same with the color of an electron. These do not exist to the unsensuous measuring instrument. All Einstein can give us is an energy activity, He can give us no sensuous impression. All he can give is an indication of variedly acting energies. Fiv What gives us form and color and beauty is purely the perception of it. where much process of our sense and the self-consciousness.

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